REMARKS

Claims 1-20 are pending. Applicants respectfully request reconsideration and reexamination of the pending claims.

As an initial matter, Applicants recognize that their invention builds upon what was known (as is universally true for all inventions). Here, Applicants readily admit that a phase-change layers made of "tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc" as recited in claim 1, for example, were known in the optical disk arts. Moreover, the use of silicon oxynitride as a protective layer was also known in the optical disk arts. However, this use of silicon oxynitride as a protective layer served to prevent oxidation of underlying data layers. A phase-change layer made of "tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc" does not need protection from oxidation. Instead, Applicants have discovered that a layer of silicon oxynitride enhances the contrast (as suggested by the title of the present application) of such a phase-change layer. This startlingly advantageous result lies in sharp contrast to the many years that such a phase-change layer was known and used in the storage disk arts. Despite such long use of both such phase-change layers and silicon oxynitride layers with respect to other types of data-carrying layers, no one but the Applicants had the inventive spark to combine the two elements to provide enhanced contrast.

The claim rejections will now be addressed directly. Consider, for example, claim 1. The Examiner has provided a number of Kodak references (USPs 4960680, 4774170, 4812386, and 4798785) that disclose the use of the claimed phase change layer that is comprised of "tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc." However, nowhere in these references is a teaching or suggestion regarding the contrast enhancement recited in claim 1, namely the provision of "a first dielectric layer overlaying the first metal/alloy layer, wherein the first dielectric layer

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comprises silicon oxynitride ~~oxinitride~~, wherein the first metal/alloy layer is positioned between the substrate and the first dielectric layer." (note that a minor typographical error in the originally-filed claim has been corrected). To provide this missing teaching, the Examiner has cited EP 0945860 and JP 03-086943. However, the JP reference concerned the use of a magneto-optic recording medium (see, e.g., page 6, second column which describes a layer of TbFeCO magneto-optic recording medium). As is well-known in the storage disk arts, such a magneto-optic recording medium is sensitive to oxidation such that it requires a protective layer. In sharp contrast, a recording medium comprised of "tin, antimony and an element selected from the group consisting of indium, germanium, aluminum, and zinc" does not need to be protected from oxidation. As such, there would be no motivation to apply the needed magneto-optic protection taught by the JP reference to the Kodak phase-change layers. The EP reference adds nothing further because it discloses a Te or Se chalcogenide which also requires protection from oxidation (see, e.g., page 2, paragraph [0006]). Accordingly, the EP reference provides no motivation to apply its oxidation-prevention to a phase-change layer that needs no such protection. Thus, claim 1 is patentable over the art of record.

Because claims 2 through 12 depend either directly or indirectly upon claim 1, they are patentable for at least the same reasons.

Claim 13 recites a method of forming the disk recited in claim 1. Accordingly, claim 13 is patentable over the art of record for at least the same reasons discussed with respect to claim 1.

Because claims 14 through 20 depend either directly or indirectly upon claim 13, they are patentable over the art of record as discussed with respect to claim 13.

Given that claim 21 is cancelled, its rejection is mooted.

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CONCLUSION

For the above reasons, pending Claims 1-20 are in condition for allowance and allowance of the application is hereby solicited. If the Examiner has any questions or concerns, a telephone call to the undersigned at (949) 752-7040 is welcomed and encouraged.

I hereby certify that this correspondence is facsimile transmitted to the Commissioner for Patents, Alexandria, VA 22313-1450, at 703-872-9306, on March 18, 2004.

Eric Hoover — March 18, 2004 Date of Signature

Respectfully submitted,

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